



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/534,568

02/17/2006

Christian Friedrich

05-348

7453

34704 7590 03/18/2008

BACHMAN & LAPOINTE, P.C.  
900 CHAPEL STREET  
SUITE 1201  
NEW HAVEN, CT 06510

EXAMINER

LEUNG, KA CHUN A

ART UNIT

PAPER NUMBER

3747

MAIL DATE

DELIVERY MODE

03/18/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/534,568	FRIEDRICH, CHRISTIAN	
	<b>Examiner</b>	<b>Art Unit</b>	
	Ka Chun Leung	3747	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 25 January 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 7-10, 12-15 and 19 is/are rejected.
- 7) ☒ Claim(s) 4-6, 11, 16-18 and 20-21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 May 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. This Office Action is in response to Applicant's amendment and remarks filed on 01/25/2008.

#### ***Specification***

2. The disclosure is objected to because of the following informalities: in Paragraph [0016], Line 13, there appears to be a typographical error. The word "in" is repeated twice. Appropriate correction is required.

#### ***Claim Objections***

3. Claim 11 is objected to because of the following informalities: the word "and" in Line 3 appears to join two dissimilar clauses. The word "and" could be modified to read "and wherein" to provide greater clarity.

#### ***Drawings***

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the features of Claim 9 "wherein said spring damper is a plurality of spring dampers disposed around a perimeter of said shaft" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended

Art Unit: 3747

replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claim 9 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Specifically, the claim recites the limitation “wherein said spring damper is a plurality of

spring dampers disposed around a perimeter of said shaft". The specification is completely silent on providing "a plurality of spring dampers". As disclosed in Paragraph [0015] and Figure 2, only a single spring damper unit (18) is provided. Even if the soft and hard parts of Figures 3 and 4 are to be considered as a plurality of spring dampers, the soft and hard parts together are disposed around only a portion of the shaft and not around the entire perimeter of the shaft.

7. Claim 19 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Specifically Claim 19 recites "wherein said first and second portions are injection molded in said window and said protrusion is simultaneously injection molded into said aperture." While the specification provides support for injection molding the soft part and hard part together (see for example paragraph [0016], it does not disclose "said protrusion simultaneously injecting molded into said aperture". On the contrary Line 11 of paragraph [0016] discloses "[d]uring assembly of the compensating shaft, this root 27 is inserted into the transverse bore 30 until the hook snaps in...".

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, Claim 12 recites "each of said plurality of damping members disposed within one of said windows" (emphasis added), which appears to indicate that there are multiple windows. However, base Claim 7 recites "a compensation weight having an eccentric center of gravity and a longitudinal window" (emphasis added). The claim is rendered indefinite since it is unclear whether the device includes one or multiple windows. If the latter is the case, then Claim 12 lacks antecedent basis for providing multiple windows for the compensation weight.

***Claim Rejections - 35 USC § 102***

10. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

11. Claims 1-2, 7-8, 10 and 14-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamaoka (JP 2000-283238 A). Yamaoka discloses a compact secondary balancer device for an engine comprising a balancer gear (1), a balancer gear shaft (2), a collar (3), a balancer shaft (7), bearings (6), a compensating weight cup and weight (8 and 9), and a damper rubber (12).

12. Specifically regarding the limitations of Claim 1, the compensating weight (8 and 9) has an eccentric center as shown in Figure 1 and would be "connected torsionally elastically" to the balancer gear shaft (2) since the weight (8 and 9) connected to damper rubber (12) via the plurality of dogs (11). The weight (8 and 9) inherently

Art Unit: 3747

includes two "edge zones" one located at the boss (14) on one end and the other located at the other end (15). These "edge zones" surrounds or wraps around both the balancer gear shaft (2) and balancer shaft (7) circumferentially as shown in the cross section of Figure 1. Between the two noted "edge zones" a "window is formed" in conjunction with the collar (3) where the damper rubber (12) is provided.

13. Specifically regarding Claims 2 and 8, the damper rubber (12) would inherently have spring-like or elastic properties and therefore can be considered as a "spring damper unit".

14. Specifically regarding Claim 7, the balancer gear shaft (2) would inherently have a "variable rotational speed" since it is connected to the crankshaft which is known in the art to be driven at variable speeds when applied to vehicles and at the very least would be variable during start up when accelerating from a dead stop to an operational speed.

15. Specifically regarding Claim 10, the damper rubber (12) has one end (inner circumference) in communication with the weight (8 and 9) and another end (outer circumference) in communication with the balancer gear shaft (2).

16. Specifically regarding Claim 14, the weight (8 and 9) forms a "closed cylindrical contour" since the outer side surfaces are continuous, see for example the phantom line for the weight cup (8) in Figure 4. It is noted that the weight (8 and 9) of Yamaoka does not provide a circular cylinder, however it forms a type of cylindrical contour nonetheless.

17. Specifically regarding Claim 15, the damper rubber (12) is a single portion of the same material, wherein this single portion can be considered a "first portion" with a "first elasticity". The damper rubber (12) is connected to the balancer gear shaft (2) via a plurality of dogs (11).

***Claim Rejections - 35 USC § 103***

18. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

19. Claims 3 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaoka (JP 2000-283238 A) in view of Emmerich et al (US Patent 3,680,608).

20. Yamaoka discloses a compact secondary balancer device for an engine that includes a damper rubber (12). However, Yamaoka does not distinctly disclose the damper rubber (12) as being made out of plastic.

21. Emmerich et al discloses a chain saw powered by an internal combustion engine (1) that includes vibration damping elastic conduit members (32) and further discloses that the elastic conduit members (32) "may consist of rubber or a suitable synthetic plastic".

22. Because both Yamaoka and Emmerich et al disclose using a rubber material as a damper material, it would have been obvious to one of ordinary skill in the art to substitute the rubber material with a suitable synthetic plastic for the predictable result of providing an elastic material with damping capabilities.



***Response to Arguments***

23. Applicant's arguments with respect to Claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.

***Allowable Subject Matter***

24. Claims 4-6, 11, 16-17, 18 and 20-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

25. The following is a statement of reasons for the indication of allowable subject matter:

a. Regarding Claims 4-6, the prior art of record fails to disclose or render obvious the combination of features as claimed and in particular a compensating shaft wherein the elastic element is made of plastic of elasticity which is graduated in the circumferential direction including a hard central part interconnecting with the compensating shaft and a soft part bearing against the compensating weight.

b. Regarding Claim 11, the prior art of record fails to disclose or render obvious the combination of features as claimed and in particular a compensation shaft which includes a stop having a first end fixed to said shaft and the communication between the second end and said compensation weight limits relative rotation between said compensation weight and said shaft.

c. Regarding Claims 16-17, the prior art of record fails to disclose or render obvious the combination of features as claimed and in particular a compensation shaft wherein the damping member further includes a second portion disposed between said first portion and said compensation weight and having a second elasticity.

d. Regarding Claim 18 and 20-21, the prior art of record fails to disclose or render obvious the combination of features as claimed and in particular a compensation shaft wherein said shaft includes an aperture and said first portion includes a protrusion, said aperture receiving said protrusion and coupling said compensating weight to said shaft.

### ***Conclusion***

26. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Stuckler (US Patent 6,854,358) has been cited as an English equivalent of applicant's cited WO 01/29447 A1 reference.

27. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ka Chun Leung whose telephone number is (571)272-9963. The examiner can normally be reached on 7:30AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Cronin can be reached on (571) 272-4536. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3747

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ka Chun Leung/  
Examiner, Art Unit 3747

/Stephen K. Cronin/  
Supervisory Patent Examiner, Art Unit 3747